

What is claimed is:

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5 1. An electroless plating method comprising the steps of:
forming a metallic film made of a metal on which an electroless
plating film can be deposited on part of the surface of an object to be
plated, or causing the metal to be in contact with part of the surface of
the object to be plated, made of a constituent material to which an
electroless plating can not be applied; and

10 dipping the object to be plated having said metallic film formed
thereon or having said metal in contact therewith in an electroless
plating bath.

2. An electroless plating method comprising the steps of:
forming a metallic film made of a metal on which an electroless
plating film can be deposited on part of the surface of an object to be
plated, or causing the metal to be in contact with part of the surface of
15 the object to be plated, made of a constituent material to which an
electroless plating can not be applied;

20 dipping the object to be plated having said metallic film formed
thereon or having said metal in contact therewith in an electroless
plating bath, and forming an electroless plating film on the entire
surface of the object to be plated, containing said metallic film or the
metal;

25 removing said metallic film or the metal, and portions of the
electroless plating film, covering up the metallic film or the metal, from
said object to be plated; and
dipping again the object to be plated subjected to the steps
described above in the electroless plating bath.

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3. An electroless plating method according to claims 1 or 2,

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wherein said object to be plated is made of plural kinds of constituent materials.

4. An electroless plating method according to claims 1 or 2, wherein said object to be plated is a thermoelectric semiconductor.

5 5. An electroless plating method according to claim 2, wherein said electroless plating film is formed so as to have a dual-layer structure comprised of not less than two metallic films.

6. An electroless plating method comprising the steps of:

10 forming a metallic film made of a metal on which an electroless plating film can be deposited on one of end faces of a thermoelectric device block formed integrally with a plurality of bar-shaped thermoelectric semiconductors, disposed with an insulation layer interposed therebetween, respectively;

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15 dipping said thermoelectric device block having the metallic film formed thereon in an electroless plating bath, and forming an electroless plating film on said metallic film and the other end face of the respective thermoelectric semiconductors, on the side thereof, opposite from the end face on which the metallic film is formed;

20 removing said metallic film and a portion of the electroless plating film covering up the metallic film; and

dipping again the thermoelectric device block subjected to the steps described above in the electroless plating bath, and forming an electroless plating film on the end face of the respective thermoelectric semiconductors from which the metallic film is removed.

25 7. An electroless plating method comprising the steps of:

causing a metal on which an electroless plating film can be deposited to be in contact with a part of at least one of end faces of

respective thermoelectric semiconductors of a thermoelectric device block formed integrally with a plurality of bar-shaped thermoelectric semiconductors, disposed with an insulation layer interposed therebetween, respectively;

5 dipping the thermoelectric device block having said metal in contact therewith in an electroless plating bath, and forming an electroless plating film on the entire surface of the respective thermoelectric semiconductors, except the part thereof, in contact with said metal,

Sub 10 separating the metal in contact with the respective thermoelectric semiconductors therefrom; and

AB dipping again the thermoelectric device block subjected to the steps described above in the electroless plating bath, and forming an electroless plating film on the part of the end faces of the respective
15 thermoelectric semiconductors, in contact with said metal.

8. An electroless plating method comprising the steps of:

forming a metallic film made of a metal on which an electroless plating film can be deposited on an end face of respective insulation layers disposed on the side of one of end faces of a thermoelectric
20 device block formed integrally with a plurality of bar-shaped thermoelectric semiconductors, disposed with the respective insulation layers interposed therebetween, such that the metallic film spans said respective insulation layers and a portion of respective end faces of both the thermoelectric semiconductors adjacent to each other across the
25 respective insulation layers alternately disposed; and

dipping the thermoelectric device block having said metallic film formed thereon in an electroless plating bath, and forming an electroless

plating film on said metallic film and both end faces of the respective thermoelectric semiconductors with the metallic film formed on the portion of the end face thereof.

9. An electroless plating method comprising the steps of:

5 forming a metallic film made of a metal on which an electroless plating film can be deposited on either an end face or the other end face of respective insulation layers, alternately, on the sides of both end faces of a thermoelectric device block formed integrally with a plurality of bar-shaped thermoelectric semiconductors, disposed with the respective insulation layers interposed therebetween, such that the metallic film spans the respective insulation layers and a portion of respective end faces of both the thermoelectric semiconductors adjacent to each other across the respective insulation layers; and

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15 dipping the thermoelectric device block having said metallic film formed thereon in an electroless plating bath, and forming an electroless plating film on said metallic film and both end faces of the respective thermoelectric semiconductors with the metallic film formed on the portion of the end face and the other end face thereof.

20 10. An electroless plating method according to any one of claims 6 to 9, wherein use is made of said thermoelectric device block provided with an exposed outer sidewall face of respective thermoelectric semiconductors positioned at opposite ends in the direction along which the respective thermoelectric semiconductors are arranged, and an electroless plating film is also formed on the exposed outer sidewall
25 faces of respective thermoelectric semiconductors positioned at opposite ends as well in said step of forming the electroless plating film.

11. An electroless plating method according to any one of claims

6 to 9, further comprising the step of rendering the end face of the thermoelectric device block into a rough surface prior to the step of forming the electroless plating film on said thermoelectric device block.

- 5 12. An electroless plating method according to any one of claims 6 to 9, further comprising the step of cleaning said thermoelectric device block before or after the step of forming the electroless plating film on said thermoelectric device block.